Complete Summary

GUIDELINE TITLE

Common gynecologic problems: a guide to diagnosis and treatment.

BIBLIOGRAPHIC SOURCE(S)

Brigham and Women's Hospital. Common gynecologic problems: a guide to diagnosis and treatment. Boston (MA): Brigham and Women's Hospital; 2002. 11 p. [10 references]

GUIDELINE STATUS

This is the current release of the guideline.

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory information has been released.

On April 7, 2005, after concluding that the overall risk versus benefit profile is unfavorable, the FDA requested that Pfizer, Inc voluntarily withdraw Bextra (valdecoxib) from the market. The FDA also asked manufacturers of all marketed prescription nonsteroidal anti-inflammatory drugs (NSAIDs), including Celebrex (celecoxib), a COX-2 selective NSAID, to revise the labeling (package insert) for their products to include a boxed warning and a Medication Guide. Finally, FDA asked manufacturers of non-prescription (over the counter [OTC]) NSAIDs to revise their labeling to include more specific information about the potential gastrointestinal (GI) and cardiovascular (CV) risks, and information to assist consumers in the safe use of the drug. See the FDA Web site for more information.

Subsequently, on June 15, 2005, the FDA requested that sponsors of all non-steroidal anti-inflammatory drugs (NSAID) make labeling changes to their products. FDA recommended proposed labeling for both the prescription and over-the-counter (OTC) NSAIDs and a medication guide for the entire class of prescription products. All sponsors of marketed prescription NSAIDs, including Celebrex (celecoxib), a COX-2 selective NSAID, have been asked to revise the labeling (package insert) for their products to include a boxed warning, highlighting the potential for increased risk of cardiovascular (CV) events and the well described, serious, potential life-threatening gastrointestinal (GI) bleeding associated with their use. FDA regulation 21CFR 208 requires a Medication Guide to be provided with each prescription that is dispensed for products that FDA

determines pose a serious and significant public health concern. See the FDA Web site for more information.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Common gynecologic problems, including:

- Ovarian cysts
- Vaginitis
- Sexually transmitted diseases (STDs)
- Pelvic inflammatory disease (PID)
- Chronic pelvic pain
- Uterine fibroids

GUIDELINE CATEGORY

Diagnosis
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To provide physicians with clear clinical pathways to identify and treat common gynecologic problem

TARGET POPULATION

General female population

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. Physical exam
2. Imaging studies (ultrasound, computed tomography, magnetic resonance imaging)
3. Measurement of tumor markers (e.g., CA-125)
4. Genetic probe
5. Culture of active lesions
6. Examination and testing of vaginal discharge
7. Serologic studies for syphilis
8. Human immunodeficiency virus (HIV) antibody testing
9. Stool test, complete blood count, measurement of thyroid- stimulating hormone, urinalysis, measurement of human chorionic gonadotropin
10. Laparoscopy
11. Flexible sigmoidoscopy, colonoscopy
12. Cystoscopy

Treatment

1. Pharmacotherapy
    - Antifungals such as miconazole (e.g., Monistat®); clotrimazole (e.g., Gyne-Lotrimin®, Femcare®, Mycelex®); butoconazole cream or suppositories (e.g., Femstat®); fluconazole (e.g., Diflucan®); terconazole (e.g., Terazol®)
    - Topical boric acid capsule
    - Antibiotics such as oral metronidazole and metronidazole gel, topical and oral clindamycin, azithromycin, doxycycline, erythromycin, erythromycin ethylsuccinate, cefixime, ceftriaxone, cefoxitin, cefotetan, ciprofloxacin, ofloxacin, ampicillin/sulbactam (Unasyn®)
    - Estrogens, such as oral estrogen (e.g. Premarin®, Estrace®); topical estrogen (e.g. Estroderm®); vaginal preparations (e.g. Premarin®; Estring®)
    - Antivirals (acyclovir, famcyclovir, or valacyclovir)
    - Nonsteroidal anti-inflammatory drugs (NSAIDs)
    - Selective serotonin reuptake inhibitors (SSRIs)
    - Gonadotropin agonists
    - Oral contraceptive pills (OCPs)
    - Imiquimod cream 5% (Aldara®)
    - Podophyllin solution (25%) (topical)
    - Trichloroacetic acid
    - Anticholinergics/antispasmodics, tricyclics for pain
    - Antispasmodics and antiflatulents
    - Loperamide, cholestyramine, or fiber for constipation

    - Lactulose, polyethylene glycol (PEG) solution, or other laxatives for constipation
    - Tegaserod, a 5-HT4 receptor partial agonist (being studied for use in patients with irritable bowel syndrome and constipation)
2. Cryotherapy
3. CO_2 laser therapy
4. Psychotherapy, acupuncture, and hypnosis
5. Surgery (abdominal hysterectomy; laparoscopic, hysteroscopic or abdominal myomectomy; myolysis; endometrial ablation; uterine artery embolization)

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed literature searches using Medline.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Ovarian Cysts

Management of Adnexal Mass

Adnexal masses may be found as the result of a patient complaint or an incidental finding on exam or an imaging study (ultrasound, computed tomography [CT], magnetic resonance imaging [MRI]). The etiology can be determined through consideration of the patient´s age, history, exam, ultrasound findings, and possibly tumor markers. The presence of ovarian cysts is more worrisome in peripubescent girls and post-menopausal women, as they are more likely to be malignant in these age groups. Other causes of adnexal enlargement on examination, besides ovarian lesions, include ectopic pregnancy and pelvic abscess.

Management of Painful Ovarian Cysts

Unilateral pelvic exam in the luteal half of the cycle is a common problem among menstruating women, and is often due to a hemorrhagic luteal cyst. The diagnosis can be confirmed by pelvic ultrasound, which should reveal a complex cyst. Repeating the ultrasound after the next cycle (preferably in the early follicular phase, 3-7 days after last menstrual period [LMP]) should show resolution of the cyst. Management consists of nonsteroidal anti-inflammatory agents and/or oral contraceptive pills, as well as reassurance that symptoms will resolve at the onset of the new cycle.

Vaginitis

Patients with vulvovaginal symptoms should be seen and examined.

Note: Refer to the original guideline document for dosing information for all of the drugs listed below.

Candida

History: Vulvar itching, ± discharge, dysuria, dyspareunia

Discharge/Physical Exam: White, "cottage cheese"; pH 3.5 to 4.5; vulvar erythema

Odor: None

Testing the Discharge: On potassium hydroxide (KOH) preparation, presence of hyphae

Treatment:

- Miconazole (e.g., Monistat®)
- Clotrimazole (e.g., Gyne-Lotrimin®, Femcare®, Mycelex®)
- Butoconazole cream or suppositories (e.g., Femstat®)
- Fluconazole (e.g., Diflucan®)
- Terconazole (e.g., Terazol®)
- Topical boric acid capsule may be necessary in refractory cases of recurrent disease

Comments:

- One third of all cases of vaginitis
- Recent use of antibiotics associated with candidal vaginitis
- Recurrent candidiasis ($\geq$4 episodes/year) occurs in 5% of women, and occur in immunocompromised hosts or patients with diabetes
- Over the counter preparations are acceptable
- Yogurt (which contains acidophilus) ingestion may decrease recurrence in healthy subjects
- Should be treated during pregnancy
- Longer treatment courses are more effective, but lower compliance
- Longer treatment and/or prophylaxis may be necessary in some cases
- Shorter course treatment may be associated with more hypersensitivity reactions
- Consider treatment with Terazol® if recurrent infection
- Boric acid needs to be specifically compounded, and is usually not available same day

Trichomonas

History: Burning, itching discharge. Dysuria, dyspareunia.

Discharge/Physical Exam: Thin, grayish green; punctate hemorrhages on vagina and cervix.

Odor: Malodorous

Testing the Discharge: Many white blood cells, flagellated ovoid protozoa, but organisms only seen in 50-70% of culture-confirmed cases. pH≥5.0

Treatment:

- Oral metronidazole

Comments:

- Sexually transmitted
- Male carriers are asymptomatic
- Often seen on Pap smears, but many false positives. Should not treat unless diagnosis is confirmed clinically.
- Partner must also be treated simultaneously
- Metronidazole is associated with an antabuse-like interaction with alcohol or vinegar
- Other important side effects of metronidazole include metallic taste in the mouth (<10% of patients); interaction with warfarin and transient leukopenia
- Association with premature rupture of membranes and prematurity is controversial. During pregnancy, common practice is to consider deferring treatment until after the first trimester, although the Centers for Disease Control and Prevention (CDC) recommends pregnant women can be treated even in first trimester. Treatment of asymptomatic pregnant women does not prevent preterm labor.

Bacterial Vaginosis (BV)

History: Discharge, foul smell, inflammatory symptoms absent

Discharge/Physical Exam: Grayish thin, homogenous discharge; pH>4.5. Culture has no role in diagnosis. Treat only if symptomatic.

Odor: Whiff test positive

Testing the Discharge: Must have 3 of following 4 findings:

- clue cells
- pH>4.5
- positive whiff test
- homogeneous discharge

Treatment:

- Oral metronidazole
- Topical clindamycin
- Metronidazole gel

Comments:

- Most common cause of vaginitis in women of childbearing age

- Some studies suggest association of bacterial vaginosis with preterm birth and treatment in women with previous premature birth associated with reduction in preterm birth
- Also associated with posthysterectomy, postpartum and postabortion infection
- No role for vaginal culture
- Metronidazole side effects (see above)
- Do not need to treat partner, since this is not a sexually transmitted disease (STD)

Atrophic vaginitis

History: Soreness, burning, dyspareunia; scant discharge

Discharge/Physical Exam: Very little or watery discharge seen; thin vaginal mucosa with loss of normal contours

Odor: None

Testing the Discharge: Small rounded, parabasal cells, few squamous cells: increased leukocytes. pH 5-7

Treatment:

- Oral estrogen (e.g. Premarin®, Estrace®)
- Topical estrogen (e.g. Estroderm®)
- Vaginal preparations of estrogen (e.g. Premarin® Estring)

Comments:

- Occurs in prepubescent and postmenopausal women
- May occur in breast-feeding women or amenorrheic women with low body fat
- Oral estrogen regimens should be accompanied by progestin administration in women with an intact uterus.
- Estring® associated with lower systemic absorption of estrogen.

Contact vulvovaginitis

History: Exposure to irritants; burning, itching

Discharge/Physical Exam: None

Odor: None

Testing the Discharge: Numerous white blood cells. May be normal

Treatment:

- Avoidance of irritant

Comments:

- Soaps, perfumes, tampons, panty liners, spermicides, latex condoms, antibacterial and antimycotic vaginal preparations can be precipitants.
- Condoms are potential irritants.
- Women may assume this is a yeast infection and self-treat with over the counter antifungals.

Sexually Transmitted Diseases

Chlamydia

Diagnosis Testing: Genetic probe. In addition to cervical swab, obtain urethral swab, if urinary symptoms are present, to increase diagnostic yield.

Treatment:

- Oral azithromycin
- Oral doxycycline
- Alternative regimens: Oral erythromycin, oral erythromycin ethylsuccinate, or oral ofloxacin

Treatment in Pregnancy: Doxycycline and ofloxacin contraindicated for pregnant women.

Recommended therapies in pregnancy:

- Oral erythromycin
- Oral amoxicillin
- Oral azithromycin

Comments: Often asymptomatic. Consider presumptive therapy or testing in women with mucopurulent cervicitis, dysuria-pyuria syndrome.

Gonorrhea

Diagnosis Testing: Genetic probe

Treatment:

- Oral cefixime
- Intramuscular ceftriaxone (Note: Intramuscular ceftriaxone will also cover potential coinfection with syphilis)
- Oral ciprofloxacin
- Oral ofloxacin

Treatment in Pregnancy: Quinolones and tetracyclines contraindicated in pregnant women.

Comments: Azithromycin (see doses in original guideline document) should be added for the treatment of possible Chlamydia infection. Note: only a 2 gram dose of azithromycin will also treat gonorrhea--the 1 gram dose is insufficient. The 2 gram dose is expensive, is associated with more gastrointestinal side effects, and

is not recommended. Disseminated gonococcal infection is more frequent during pregnancy.

Genital herpes simplex virus

Diagnosis Testing:

- Presence of classic lesions; culture of active lesions
- Recurrent lesions, often with neuropathic component (itching, burning)

Treatment:

- Acyclovir
- Famcyclovir
- Valacyclovir
- Chronic suppressive therapy is preferred over episodic therapy--consider this if 6 outbreaks/year. May stop after one year of suppression and reassess.
- If therapy is used for recurrence, patients must start treatment at first sign of recurrence and within 24 hours of outbreak.

Treatment in Pregnancy: Since there is the most experience with acyclovir in pregnancy, it is the treatment of choice for pregnant patients. Valacyclovir and famcyclovir are probably also safe in pregnancy.

Comments:

- For chronic suppression: Oral acyclovir, oral famcyclovir, or oral valacyclovir.
- Systemic manifestations associated with initial episode may need to be treated with parenteral acyclovir.
- Oral acyclovir, for the last 4 weeks of gestation given to women with initial presentation of herpes during pregnancy decreases need for cesarean section.
- Up to 15% of first episodes of herpes may be asymptomatic
- Asymptomatic shedding may be a manifestation of recurrent disease and a source of transmission.

Genital warts

Diagnosis Testing: Clinical diagnosis on examination.

Treatment:

- Imiquimod cream 5% (Aldara®)
- Podophyllin solution (25%) (topical) limited success--only 20 to 50% clearance rate at three months. Usually used in combination with cryotherapy.
- Trichloroacetic acid. Repeated application is required. However, in contrast to podophyllin, trichloroacetic acid can be used for internal lesions.
- Cryotherapy. Causes pain during application. Localized inflammation may occur afterward. Repeat procedure may be necessary, since success rate at three months is 63 to 92 percent.

- CO_2 laser therapy. Done in operating room and requires anesthesia. Rate of wart clearance almost 100 percent over one year; however, recurrence can be up to 45 percent. Adverse events include scarring and pain for the patient.

Treatment in Pregnancy:

- Podophyllin contraindicated in pregnancy
- Cryotherapy is safe in pregnancy

Comments:

- Imiquimod cream--local irritation, pain, burning occurs in 50% of patients.
- CO_2 laser therapy--The laser operator is also at risk for developing mucosal warts. This is the most expensive method of treating warts.

Syphilis

Diagnosis Testing: Serology is the diagnostic method of choice. Note that during the early chancre stage, serology may be negative. Serology can be followed to document treatment response.

Treatment: Single dose of intramuscular benzathine penicillin G, standard therapy for known early syphilis (documented non-reactive serology within past year, or documented chancre of primary syphilis). A second dose of benzathine penicillin given one week after the first improves the likelihood of serologic response. If stage of syphilis is unknown patients should be treated for latent syphilis of unknown duration with 3 doses of benzathine at weekly intervals.

Treatment in Pregnancy: Pregnant women with penicillin allergy should be desensitized and treated with penicillin. Consider treating pregnant women with viable fetus under direct observation in consideration of Jarisch-Herxheimer reaction.

Comments:

- High false positive (rate about 2%) for nonspecific antibody tests. Positives must be confirmed by fluorescent treponemal antibody absorption (FTA-ABS) or microhemagglutination assay for Treponema pallidum (MHA-TPS).
- For penicillin allergy in the non-pregnant patient, oral doxycycline or oral tetracycline.

Human Immunodeficiency Virus (HIV)

Diagnosis Testing: HIV antibody testing (consists of screening test such as enzyme-linked immunosorbent assay [ELISA]; positives are confirmed by Western Blot)

Viral load can be used during an acute infection when the antibody is still negative.

Treatment:

- Treatment of non-pregnant women does not differ from treatment in men.
- Antiretrovirals according to clinical/immunologic/virologic stage
- Prophylaxis for opportunistic infections indicated according to CD4 count.
- Appropriate immunizations should be provided to those newly diagnosed.

Treatment in Pregnancy: Reduction in vertical transmission rate from 25% to <2% can be achieved with appropriate antiretroviral treatment during the antepartum, intrapartum, and neonatal time period.

Comments: Appropriate intrapartum management, and in some cases elective cesarean section may decrease risk for vertical transmission. HIV transmissible in breast milk. Women with HIV have higher rates of cervical cancer and need more intensive screening and evaluation.

Recommendations for Patients with Sexually Transmitted Diseases

Clinical Considerations

The following considerations are important in all patients with sexually transmitted diseases:

- Notification and treatment of partners.
- Evaluation for other sexually transmitted diseases (STDs) (syphilis serology, gonococcal testing, chlamydia, HIV)
- HIV counseling prior to testing.
- Discussion of safe-sex practices with provision of condoms.
- Discussion of contraception, including the morning-after pill.
- Pregnancy testing, since pregnancy affects the selection of therapy.

Screening for Sexually Transmitted Diseases

Approximately 5% of women <25 years of age without risk factors for STDs have chlamydia. Since studies have shown that routine screening of low risk women <25 years of age for chlamydia reduces the risk of pelvic inflammatory disease (PID) by over 50%, all sexually active women in this age group should be screened for chlamydia. Women who are victims of rape or nonconsensual sex and women with a new male partner within the past 3 months, who did not use condoms, should also be tested.

Pelvic Inflammatory Disease

Acute ascending infection of the female gynecologic tract is usually caused by N. gonorrhea (25-80%) or chlamydia (10-40%). More rarely, Bacteroides, coliforms, and streptococci can be causative organisms.

Diagnosis and Treatment of Pelvic Inflammatory Disease

To make the diagnosis, all three criteria, without alternative diagnosis, must be present:

- Lower abdominal tenderness

- Adnexal tenderness
- Cervical tenderness

The additional criteria below will increase specificity:

- Temperature >101
- Cervical or vaginal discharge
- Elevated sedimentation rate
- Positive gonococcal (GC) or chlamydia cultures (although negative cultures do not rule out upper tract disease)

Treatment of Pelvic Inflammatory Disease

Treatment of acute phase

- Intravenous (IV) cefoxitin or IV cefotetan + IV doxycycline
- IV clindamycin + gentamicin

Alternative

- IV ofloxacin + IV metronidazole
- IV ampicillin/sulbactam + IV doxycycline
- IV ciprofloxacin + doxycycline + metronidazole
- Oral regimen: oral ofloxacin + oral metronidazole

Comments:

- After improvement, complete oral doxycycline or oral clindamycin, particularly if tubo-ovarian abscess is present.
- Consider hospitalization if the patient is pregnant, has tubo-ovarian abscess, is immunocompromised or is not responding clinically to oral therapy.

Chronic Pelvic Pain

Diagnostic Approach

A reasonable approach is to consider the diagnoses listed (see Diagnosis of Chronic Pelvic Pain) and perform testing appropriate for symptoms. Patients should fill out diaries detailing the intensity of the pain and when they get it, as well as the timing of menses and intercourse. Diary forms available on-line at www.pelvicpain.org.

Diagnostic Tests

Testing for all women with pelvic pain:

- Thorough history and physical including stool test for occult blood
- Complete blood count (CBC)
- Thyroid-stimulating hormone (TSH) (for patients with bowel symptoms)
- Urinalysis
- Tests for chlamydia, gonorrhea

- Human chorionic gonadotropin (HCG)
- Pelvic ultrasound

Further studies if indicated by history and/or exam:

- Laparoscopy
- Flexible sigmoidoscopy
- Cystoscopy

Diagnosis of Chronic Pelvic Pain

Gynecologic Causes

Endometriosis

Clinical Features: Cyclic pain that is exacerbated by onset of menses and during the luteal phase; dyspareunia.

Diagnosis: surgical; many women have adnexal enlargement, cervical stenosis, or lateral displacement of uterus

Adenomyosis

Clinical Features: Heavy menstrual bleeding

Diagnosis: Enlarged, globular uterus on exam; ultrasound may have suggestive findings, but diagnosis must be made by uterine (myometrial) biopsy.

Uterine Fibroids

Clinical Features: Pelvic pressure with larger size. Pain if degeneration occurs.

Diagnosis: Enlarged mobile uterus on exam. Pelvic ultrasound very sensitive for detecting fibroids.

Adhesions

Clinical Features: Non-cyclical pelvic pain. Dyspareunia.

Diagnosis:

- Pain with cervical manipulation on exam
- Laparoscopic

Comments: Caused by endometriosis, a history of PID, or a history of previous pelvic or abdominal history. May require surgical intervention, though recurrence rate is high.

Non-Gynecologic Causes

Interstitial Cystitis

Clinical Features: Pain with bladder filling, relief with voiding. No urinary volumes greater than 200 cc.

Diagnosis: Evaluation includes urinalysis, urine culture, voiding dairy. Cystoscopy shows classic changes in the mucosa.

Comments: Have patients keep bladder diary. Syndrome is ruled out if patients can sleep through the night or have any volumes greater than 300 cc. Treatment with pentosan polysulfate (Elmiron®) may be helpful.

Fibromyalgia

Clinical Features: General achiness, fatigue not relieved by rest.

Diagnosis: Tenderness at 11/18 trigger points along with presence of fatigue.

Comments: Nonsteroidal anti-inflammatory drugs (NSAIDs), selective serotonin reuptake inhibitors (SSRIs), or low-dose amitriptyline may be effective.

Myofascial Pain Syndrome

Clinical Features: Tenderness confined to one anatomic region

Diagnosis: Palpation of trigger points produces reproducible pain.

Comments: NSAIDs may be effective

Irritable Bowel Syndrome

Clinical Features:

- Abdominal pain or discomfort and disturbed defecation
- Change in stool frequency or consistency
- Bloating and visible distention

Diagnosis: History of 12 weeks, which may not be consecutive, in the past 12 months of abdominal discomfort or pain that has 2 of 3 features:

- Relieved by defecation
- Onset associated with a change in frequency of stool
- Onset associated with a change in form (appearance of stool)

Comments:

Red flag symptoms to suggest another diagnosis:

- nocturnal symptoms of pain and abnormal bowel functions

- family history of gastrointestinal cancer, inflammatory bowel disease, or celiac disease
- new onset of symptoms in patients 50+ years of age
- weight loss
- blood in the stool

Treatment is symptomatic and depends upon the type and severity of irritable bowel syndrome. It includes:

- anticholinergics/antispasmodics, tricyclics and SSRIs for pain
- antispasmodics and antiflatulents for bloating
- loperamide, cholestyramine or fiber for diarrhea
- lactulose, polyethylene glycol (PEG) solution, or other laxatives for constipation
- Tegaserod, a 5-HT4 receptor partial agonist is being studied for use in patients with irritable bowel syndrome and constipation.
- Psychotherapy, acupuncture and hypnosis can also be beneficial.

Psychological Disorders

Clinical Features: Often a long history of pain with negative, thorough work-up in the past by other providers. There may be a history of sexual abuse.

Diagnosis: Negative, extensive work-up

Comments: Treatment is difficult. Invasive tests and treatments should be avoided.

Treatment of Chronic Pelvic Pain

Treatment of chronic pelvic pain is often difficult and may need a multidisciplinary approach. The role of the primary care physician is to try to determine the source of the pain, to refer the patient for appropriate diagnostic testing, and to be aware that the patient may have a history of or ongoing cryptic physical and/or sexual abuse. Initial approach for the primary care physician, after completing the above evaluation is to consider oral contraceptive pills (OCPs) if the pain is cyclical, NSAIDs if it is non-cyclical and especially if it may be musculoskeletal in origin. If the workup is non-specific, sometimes patients may benefit from a consultation with a multidisciplinary pain service.

In all patients with chronic pelvic pain, psychological disorders such as somatization or other anxiety disorders should be considered as a possible underlying etiology. Clinicians should be especially alert to this possibility in patients with a long history of pain with a negative, thorough work-up in the past, often by many providers. Patients may give a history of physical or sexual abuse. An important aspect of treatment is to avoid invasive testing and treatments when these have been performed in the past and were negative. When the patient is amenable, referral to psychiatry may be helpful, but such cases often remain difficult to manage.

<u>Diagnosis and Management of Fibroids</u>

Physical Examination

Physical examination reveals an enlarged, often irregular uterus. Typically, uterine size is expressed as equivalence to gestational size (e.g. 20-week size).

Diagnostic Studies

Ultrasound is usually done to confirm the diagnosis, and to exclude ovarian tumors.

Treatment

The need for treatment depends upon the patient´s symptoms and her desire for fertility.

Monitoring

Physical examination should be performed annually. Pelvic ultrasound should be ordered if there are new symptoms or if a change in size is detected on exam. If there is a large increase in size, consider referral to gynecology for evaluation for possible sarcoma.

Further information is available at www.fibroids.net.

Fibroid Treatments

Surgery

Abdominal hysterectomy

Advantages: No recurrence of symptoms

Disadvantages: Not suitable for women who desire fertility.

Comments: Data show women have higher quality of life after surgery.

Laparoscopic myomectomy

Advantages: Minimally invasive

Disadvantages: Only indicated for subserosal fibroids of intermediate size. May have higher risk of uterine rupture in subsequent pregnancies.

Comments: Requires experienced operator

Abdominal myomectomy

Advantages: Uterine conservation

Disadvantages: About 50% of women will have ultrasound evidence of fibroids at 5 years; risk of second operation 11-26%. May require cesarean section for future pregnancies.

Hysteroscopic myomectomy

Advantages: Decreases menorrhagia. Low risk of uterine rupture in subsequent pregnancies. Can sometimes be done with local anesthesia.

Disadvantages: Little reduction in uterine size and bulk-related symptoms

Comments: Ideal for submucosal fibroids. Requires skilled operator. Can be combined with endometrial ablation in women who do not desire future pregnancies.

Myolysis

Mechanism: Coagulation of fibroid tissue

Advantages: Can be dome laparoscopically

Disadvantages: May increase chance of uterine rupture and adhesion formation

Endometrial ablation

Mechanism: Cautery or thermal balloons

Advantages: Newer techniques require less operator skill. Can often be done with local anesthesia.

Disadvantages: Many women with larger fibroids and/or submucosal fibroids that distort cavity may not be candidates.

Comments: Not as effective in controlling menorrhagia as in women without fibroids. Not indicated for women who desire future pregnancies. Not appropriate for women with prior hyperplasia or who are at high risk for endometrial cancer.

Uterine artery embolization

Mechanism: Angiographic blockage of both uterine arteries.

Advantages: Useful for controlling menorrhagia. Requires only sedation and local anesthesia.

Disadvantages: Variability in volume reduction. Post-procedure pain may be severe.

Comments: Long-term studies about post-procedure fertility are needed.

Medical Therapy

Gonadotropin-releasing hormone (GnRH) agonists

Mechanism: Decrease gonadotropin and estrogen production

Advantages: Over 90% induction of amenorrhea. 35-65% reduction in uterine size. Only indicated when use would change the type of procedure (i.e. allowing a vaginal hysterectomy to be performed instead of abdominal).

Disadvantages: After discontinuation, rapid return to pre-treatment uterine sizes; severe hot flashes and menopausal symptoms; osteoporosis with long-term use. Expensive.

Comments: Food and Drug Administration-approved for use before surgical interventions to shrink size of fibroids and improve anemia. Some of the menopausal symptoms can be alleviated by concurrent use of gonadotropin-releasing hormone and hormone replacement therapy.

CLINICAL ALGORITHM(S)

Algorithms are provided in the original guideline document for:

- Management of Adnexal Mass
- Management of Fibroids

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

Guidelines are based on a comprehensive review of recent medical literature and reflect the expertise of leading clinicians within Brigham and Women´s Hospital.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate diagnosis and treatment of common gynecologic problems

POTENTIAL HARMS

- Recurrent use of antibiotics is associated with candidal vaginitis.
- Metronidazole is associated with an antabuse-like interaction with alcohol or vinegar. Other important side effects of metronidazole include metallic taste in the mouth (less than 10% of patients); interaction with warfarin and

transient leukopenia. Association with premature rupture of membranes and prematurity is controversial.
- Cryotherapy. Causes pain during application. Localized inflammation may occur afterward.
- CO_2 laser therapy. The laser operator is also at risk for developing mucosal warts.
- Some surgical procedures for uterine fibroids can increase the chance for uterine rupture in subsequent pregnancies as well as adhesion formation; post-operative pain may be severe after uterine artery embolization.
- Gonadotropin-releasing hormone agonists may cause severe hot flashes and menopausal symptoms. Osteoporosis may occur with long-term use.

CONTRAINDICATIONS

CONTRAINDICATIONS

The following are contraindicated in pregnancy: tetracyclines (including doxycycline), quinolones (ofloxacin and others), podophyllin.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This guide is not intended to convey rigid standards, but instead, provide the primary care physician an algorithm for thinking through the identification and management of women with common gynecologic problems. Treatment should be tailored to the needs of the individual woman.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Clinical Algorithm

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Brigham and Women's Hospital. Common gynecologic problems: a guide to diagnosis and treatment. Boston (MA): Brigham and Women's Hospital; 2002. 11 p. [10 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002

GUIDELINE DEVELOPER(S)

Brigham and Women's Hospital (Boston) - Hospital/Medical Center

SOURCE(S) OF FUNDING

Brigham and Women´s Hospital

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Common Gynecologic Problems Guideline Authors: Karen L. Lifford, MD; Elizabeth Annella Stewart, MD; Ruth Ellen Tuomala, MD; Lori Wiviott Tishler, MD; Johanna Patricia Daily, MD; Sonia Friedman, MD; Mary D. Chapin, RN; Soheyla Gharib, MD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Print copies: Available from the Brigham and Women´s Hospital, 75 Francis Street, Boston, Massachusetts 02115. Telephone: (800) BWH-9999.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on May 30, 2003. The information was verified by the guideline developer on August 14, 2003. This summary was updated on May 3, 2005 following the withdrawal of Bextra (valdecoxib) from the market and the release of heightened warnings for Celebrex (celecoxib) and other nonselective nonsteroidal anti-inflammatory drugs (NSAIDs). This summary was updated by ECRI on June 16, 2005, following the U.S. Food and Drug Administration advisory on COX-2 selective and non-selective non-steroidal anti-inflammatory drugs (NSAIDs).

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 9/25/2006